

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An electrokinetic method for at least one of groundwater protection, soil remediation ~~and/or~~ soil engineering which comprises applying an electric field between iron-rich sacrificial electrodes, which are implanted in an area of water-bearing soil, sediment or slurry so as to generate an abrupt pH and Eh gradient from acid to alkaline conditions, with the spontaneous *in situ* precipitation of a stable iron-rich band occurring at the boundary between the acid and alkaline zones.
2. (Original) A method as claimed in claim 1, wherein the pH gradient is from pH2 to pH3.
3. (Previously Presented) A method as claimed in claim 1, wherein the current is applied between one or more pairs of electrodes inserted in the area of soil, sediment or slurry.
4. (Original) A method as claimed in claim 3, wherein the electrodes are made of cast iron, scrap iron, stainless steel or other iron-rich material.
5. (Previously Presented) A method as claimed in claim 3, wherein the voltage employed is less than 0.5 volts per cm of the distance between a pair of electrodes.
6. (Currently Amended) A method as claimed in claim 1, wherein the soil,

sediment or slurry contains at least one of organic, inorganic ~~and/or~~ radioactive contaminants.

7. (Currently Amended) A method as claimed in claim 1, wherein the iron-rich band acts as at least one of a physical ~~and/or~~ chemical barrier to contaminants present in the soil, sediment or slurry.

8. (Currently Amended) A method as claimed in claim 1, where iron is precipitated to form an impermeable coherent band, or a coating which cements ~~soil/sediment~~ at least one of soil or sediment particles, or a dispersed coating on mineral grains, between two or more electrodes.

9. (Currently Amended) A method as claimed in claim 1, wherein the generation of the pH/Eh gradient performs at least one of mobilizing, remobilizing, or trapping ~~mobilises, remobilises and/or traps~~ contaminants present in the soil, sediment or slurry.

10. (Currently Amended) A method as claimed in claim 1, which is performed for the purpose of at least one of the stabilization ~~and/or~~ strategic dewatering/~~rewatering~~, or rewatering of at least one of soils, sediment ~~and/or~~ slurries, the improvement of the physical properties of soils and sediments for engineering purposes, and at least one of the forced and directed migration of contaminated leachates, ~~and/or~~ electro-osmotic purging of non-polar contaminants.

11. (Previously Presented) A method as claimed in claim 2, wherein the current is applied between one or more pairs of electrodes inserted in the area of soil,

sediment or slurry.

12. (Previously Presented) A method as claimed in claim 4, wherein the voltage employed is less than 0.5 volts per cm of the distance between a pair of electrodes.

13. (Currently Amended) A method as claimed in claim 2, wherein the soil, sediment or slurry contains at least one of organic, inorganic ~~and/or~~ radioactive contaminants.

14. (Currently Amended) A method as claimed in claim 3, wherein the soil, sediment or slurry contains at least one of organic, inorganic ~~and/or~~ radioactive contaminants.

15. (Currently Amended) A method as claimed in claim 4, wherein the soil, sediment or slurry contains at least one of organic, inorganic ~~and/or~~ radioactive contaminants.

16. (Currently Amended) A method as claimed in claim 2, which is performed for the purpose of at least one of the stabilisation ~~and/or~~ strategic dewatering/~~rewatering~~, or rewatering of at least one of soils, sediment ~~and/or~~ slurries, the improvement of the physical properties of soils and sediments for engineering purposes, and at least one of the forced and directed migration of contaminated leachates, ~~and/or~~ electro-osmotic purging of non-polar contaminants.

17. (Currently Amended) A method as claimed in claim 3, which is performed for the purpose of at least one of the stabilisation ~~and/or~~ strategic

dewatering/~~rewatering~~, or rewatering of at least one of soils, sediment ~~and/or~~ slurries, the improvement of the physical properties of soils and sediments for engineering purposes, and at least one of the forced and directed migration of contaminated leachates, ~~and/or~~ electro-osmotic purging of non-polar contaminants.

18. (Currently Amended) A method as claimed in claim 4, which is performed for the purpose of at least one of the stabilisation ~~and/or~~ strategic dewatering/~~rewatering~~, or rewatering of at least one of soils, sediment ~~and/or~~ slurries, the improvement of the physical properties of soils and sediments for engineering purposes, and at least one of the forced and directed migration of contaminated leachates, ~~and/or~~ electro-osmotic purging of non-polar contaminants.

19. (Currently Amended) A method as claimed in claim 5, which is performed for the purpose of at least one of the stabilisation ~~and/or~~ strategic dewatering/~~rewatering~~, or rewatering of at least one of soils, sediment ~~and/or~~ slurries, the improvement of the physical properties of soils and sediments for engineering purposes, and at least one of the forced and directed migration of contaminated leachates, ~~and/or~~ electro-osmotic purging of non-polar contaminants.

20. (Currently Amended) A method as claimed in claim 6, which is performed for the purpose of at least one of the stabilisation ~~and/or~~ strategic dewatering/~~rewatering~~, or rewatering of at least one of soils, sediment ~~and/or~~ slurries, the improvement of the physical properties of soils and sediments for engineering purposes, and at least one of the forced and directed migration of contaminated leachates, ~~and/or~~ electro-osmotic purging of non-polar contaminants.